



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: November 3, 1983

TO: Division File

FROM: Craig Liska

SUBJECT: 03165003 - Cook County - Chicago/Sherwin Williams
Subpart F Groundwater Monitoring

EPA Region 5 Records Ctr.



355906

An inspection of the subject site was conducted on November 3, 1983. Daryl Baker was contacted at the time of the inspection. This facility operates a hazardous waste surface impoundment. Mr. Baker's knowledge of the Subpart F requirements appeared limited. Much of my time was spent clearing up several of his misunderstandings with the regulations. I believe that Mr. Baker had a better grasp on what was required at the end of the inspection. For further aid, I gave him a copy of the US EPA guidance document for interim status facilities.

One of the discrepancies noted in the facility's records was their utilization of the Student's t-test. The facility conducted the comparison between the data from four consecutive quarters on the upgradient well (replicates) and four consecutive quarters from each downgradient wells (non-replicates). I explained that the Student's t-test utilizes the downgradient data obtained from replicate samples taken on a semi-annual basis during the second year of sampling. Sherwin William's version of the Student's t-test utilized data obtained only during the first year.

Another discrepancy and probably the most serious is the use of two monitoring systems to establish the background data. The facility started their monitoring program by sampling monitor wells MW-1, MW-2 and MW-3 (Figure #1) on 9-21-82 and 11-24-82. On November 29, 1982 Soil Testing Services installed three additional wells near the surface impoundments, monitor wells MW-1A, MW-2A and MW-3A. On 3-23-83 and 6-13-83, the facility sampled monitor wells MW-1A, MW-2A, MW-3A and MW-3 (Figure #1). Sherwin Williams complied the analysis data from MW-1 and MW-1A and are using that for the background data on the upgradient well MW-1A. The same holds true for MW-2A using MW-2 and MW-2A data. As of Oct., 1983, MW-3A had two quarters of data and MW-3 had four quarters data. I informed Mr. Baker that he had followed improper procedures for the first year analysis. The facility does not have well installation details for MW-1, MW-2 or MW-3. The screen lengths and total depths are unknown. In order to bring the facility into compliance, I recommended the following: 1) disregard analysis results obtained from MW-1, MW-2 and MW-3, 2) use existing data for drinking water standards and groundwater quality parameters from wells MW-1A, MW-2A

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and MW-3A, 3) sample the same wells (1A, 2A & 3A) for the missing quarters, 4) obtain four consecutive quarters, 4) obtain four consecutive quarters of contamination indicator parameters for wells MW-1A, MW-2A and MW-3A using replicate samples for MW-1A, 5) install an additional downgradient well near MW-3; the new well should be constructed in the same manner as MW-1A, 2A and 3A, and 6) the new replacement well should be sampled to satisfy the first year requirements.

The following deficiencies were noted at the time of the inspection:

- 1) There is an insufficient number of downgradient monitor wells. MW-3 is on inadequate well due to it's excessive depth and the lack of information concerning it's construction.
- 2) The facility has not developed a sampling and analysis plan nor chain of custody procedures.
- 3) The facility has not developed an outline describing a groundwater quality assessment program.
- 4) The facility has not submitted an evaluation of the groundwater surface elevations as required in the annual reports.
- 5) The facility records are lacking a regional hydrogeologic map of the area.
- 6) The facility is lacking a site water table (potentiometric) contour map.

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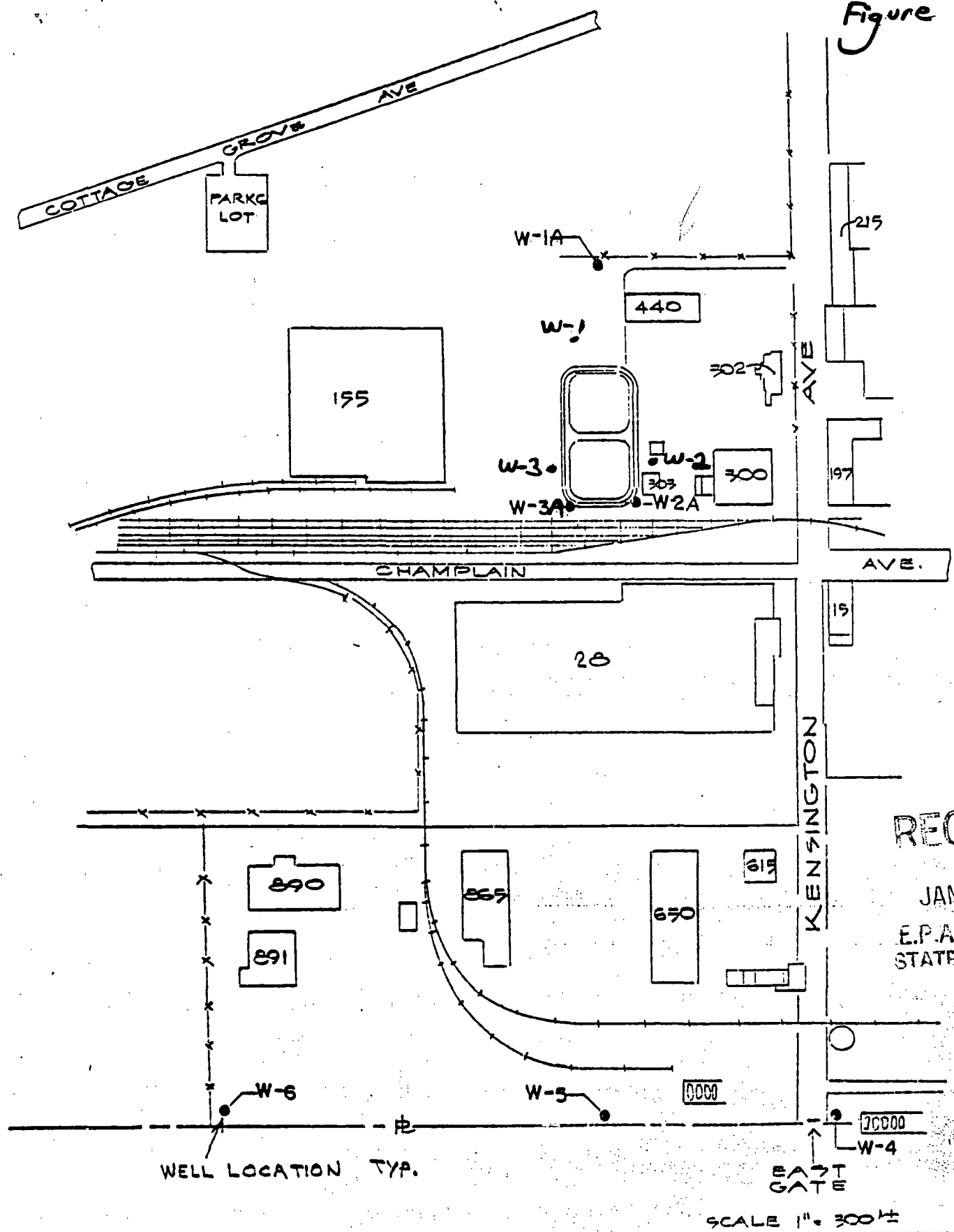
cc: Northern Region
Mark Haney, Compliance Monitoring
Craig J. Liska

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Figure 1



SOIL BORING LOCATION DIAGRAM
GROUND WATER MONITORING WELL INSTALLATION
SHERWIN WILLIAMS CHEMICAL COMPANY
 11541 S. CHAMPLAIN, CHICAGO, ILLINOIS



STS Consultants Ltd.
 111 Pflingsten Road
 Northbrook, Illinois 60062

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